

Amendments to the Specification

Please replace the Abstract with the following paragraph:

A system and method ~~that for detecting~~ the location ~~as well as the~~ and luminance transition range of slant image edge in a digital image. The variance value for the pixels inside a window in the image is calculated. ~~Based, based on the variance value, which a~~ current pixel ~~can be~~ is classified ~~as being in an edge region or in a non-edge region~~. If the current pixel is in a non-edge region, no further checking is needed, otherwise binary pattern data is generated from the pixels inside the window. Then it is determined whether the current pixel is a center pixel in a luminance transition range of a slant edge based on the binary pattern data at the current pixel location and its neighboring binary pattern data. ~~It is determined if~~ If the current pixel is the center pixel in a luminance transition range of a ~~e.g. $\pm 45^\circ$ direction edge~~. If it is, then ~~no further processing is needed at the current pixel location and the luminance transition range is considered as 3 pixels wide~~. Otherwise, based on the neighboring binary pattern data, another checking process is performed to determine whether the current pixel is a center pixel in a luminance transition range other than a $\pm 45^\circ$ slant edge. If the current pixel is considered as a center pixel in a luminance transition range other than a $\pm 45^\circ$ slant edge, then the length of the luminance transition range of the slant edge is determined by checking more binary pattern data inside the window.